NORYL GTX™ RESIN GTX964W

REGION ASIA

DESCRIPTION

NORYL GTX™ 964W resin is a non-reinforced alloy of Polyphenylene Ether (PPE) + Polyamide (PA) that exhibits very high impact resistance and high flow. This injection moldable grade was designed for large parts, such as automotive body panels, and thin wall applications.

TYPICAL PROPERTY VALUES

Revision 20190925

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	44	MPa	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	56	%	ASTM D 638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	73	MPa	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	1830	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	50	MPa	ISO 527
Tensile Stress, break, 50 mm/min	45	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	50	%	ISO 527
Flexural Stress, yield, 2 mm/min	70	MPa	ISO 178
Flexural Modulus, 2 mm/min	1800	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	528	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	41	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	50	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	20	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	45	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	20	kJ/m²	ISO 179/1eA
THERMAL			
HDT, 0.45 MPa, 6.4 mm, unannealed	185	°C	ASTM D 648
Thermal Conductivity	0.23	W/m-°C	ASTM C177
Vicat Softening Temp, Rate A/50	240	°C	ISO 306
Vicat Softening Temp, Rate B/50	175	°C	ISO 306
Vicat Softening Temp, Rate B/120	180	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	175	°C	ISO 75/Be
PHYSICAL			
Specific Gravity	1.08	-	ASTM D 792
Water Absorption, equilibrium, 23C	3.5	%	ASTM D 570
Water Absorption, 50% RH, equilib	1.19	%	ASTM D 570
Mold Shrinkage, flow	1.5	%	SABIC method
Mold Shrinkage, xflow	1.3	%	SABIC method
Melt Volume Rate, MVR at 280°C/2.16 kg	7	cm³/10 min	ISO 1133
INJECTION MOLDING			
Drying Temperature	95 – 105	°C	
Drying Time	3 – 4	hrs	

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Drying Time (Cumulative)	8	hrs	
Maximum Moisture Content	0.07	%	
Minimum Moisture Content	0.02	%	
Melt Temperature	295 – 315	°C	
Nozzle Temperature	295 – 315	°C	
Front - Zone 3 Temperature	290 – 315	°C	
Middle - Zone 2 Temperature	280 – 315	°C	
Rear - Zone 1 Temperature	275 – 315	°C	
Mold Temperature	75 – 120	°C	
Back Pressure	0.3 – 1.4	MPa	
Screw Speed	20 – 100	rpm	
Shot to Cylinder Size	30 – 50	%	
Vent Depth	0.013 – 0.038	mm	

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